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4.5 BIOLOGICAL RESOURCES

INTRODUCTION

This section describes the plant communities, wildlife habitats, and special-status species that occur within the project area and addresses potential project-specific and cumulative impacts to these resources. Impacts evaluated here include the potential for loss of sensitive plant communities and wildlife habitats, potential for loss of special-status (endangered, threatened, rare, or otherwise protected), blockage of major migration corridors, and potential detrimental effects to nesting raptors.

IMPACTS EVALUATED IN OTHER SECTIONS

The following items are related to the Biological Resources section, but are evaluated in other sections of this document:

- Agriculture and Open Space: Impacts dealing with agriculture and open space are covered in Section 4.1, Land Use.

AFFECTED ENVIRONMENT (SETTING)

The affected environment includes the biological resources that may be affected by the proposed ProStyle Sports Complex project and the alternative site in Manteca. The affected environment is described in terms of plant communities (including sensitive plant communities), wildlife habitat, and special-status plant and animal species.

Plant Communities

Plant communities are assemblages of plant species occurring together in the same area, and are defined by species composition and relative abundance. Most plant community descriptions and nomenclature used in this analysis are based on Holland (1986) and Sawyer & Keeler-Wolf (1995). A "cropland" classification, which is not used by Holland, is included to describe the cropland vegetation type occurring in the project area.

Cropland

Croplands are located on flat to gently rolling terrain that is tilled prior to commencement of crop production (Zeiner 1988). Due to the artificially controlled growth and harvesting regime, croplands do not conform to normal seral stages (i.e., growth stage of habitat). These habitats may either be annual or perennial depending upon the crop-rotation system and geographic location. Crops grown in the project area include corn, barley, and alfalfa. There are no special-status plant species associated with croplands.

Freshwater Marsh

Freshwater Marsh communities are dominated by perennial, emergent monocots, commonly rush (*Scirpus californicus*) and cattail (*Typha latifolia*), averaging 4 to 5 meters tall. This community typically is found in quiet areas permanently flooded by fresh water (not brackish or alkaline). Prolonged saturation permits accumulation of deep, peaty soils. Other characteristic species include sedges (*Carex athrostachya*), umbrella sedges (*Cyperus eragrostis*), and spike rushes (*Eleocharis macrostachya*). This community type occurs most extensively in the upper portion of the Sacramento-San Joaquin River Delta and occasionally in coastal valleys near river mouths and around the margins of lakes and springs. Freshwater Marsh is common in the Sacramento and San Joaquin valleys in river oxbows and other areas, such as ditches, on the flood plain. In the project area this plant community is found in ditches and low areas created by agricultural operations, but not cropped.

Special-status plant species that may be found in freshwater marsh habitat within the project area include blue mugwort (*Limosella subulata*), Delta tule pea (*Lathyrus jepsonii* var. *jepsonii*), rose mallow (*Hibiscus lasiocarpus*), Suisun Marsh aster (*Aster lentus*), and Mason's lilaeopsis (*Lilaeopsis masonii*).

Wildlife Habitats

Wildlife habitat provides cover, food, and water necessary to meet the biological requirements of one or more individuals of an animal species. Changes in habitats (e.g., change in seral stage within a particular habitat type or change from one habitat type to another) and changes in essential habitat elements which relate to reproduction, foraging, and cover requirements may impact abundance, distribution, diversity, and interactions between wildlife species.

The wildlife habitats in the project area are identified herein based on the habitat classification system developed by the California Department of Fish and Game for the California Wildlife Habitat Relationships (CWHR) program. Table 4.5-1 identifies the CWHR habitat type that corresponds with each plant community found in the project area. The vegetative components of each wildlife habitat type generally correlate with the plant communities described above. The wildlife habitats in the project area are described below Table 4.5-1 in terms of the assemblage of wildlife species that they typically support.

Table 4.5-1

Plant Community/CWHR Habitat Type Comparison

Plant Community	Corresponding CWHR Habitat[1]
Cropland	Cropland
Freshwater Marsh	Fresh Emergent Wetland

[1] Habitats in the CWHR system are grouped according to vegetative dominance or unique characteristics to which wildlife are thought to respond (Mayer and Laudenslayer 1988).

Cropland

Although cropland generally provides low to moderate habitat value for wildlife, low-growing row crops and fallow fields may provide important foraging habitat for resident open-country hawk species such as Swainson's hawk (*Buteo swainsoni*), American kestrel (*Falco sparverius*) and red-tailed hawk (*Buteo jamaicensis*). Ferruginous hawk (*Buteo regalis*), rough-legged hawk (*Buteo lagopus*), and prairie falcon (*Falco mexicanus*) also forage in fallow fields during the fall and winter months. Migratory waterfowl species such as Canada goose (*Branta canadensis*) may seasonally depend on croplands for foraging habitat. There are no known special-status wildlife species associated with croplands in the project area.

Fresh Emergent Wetland

In terms of production of biomass, fresh emergent wetlands surpass most other wildlife habitats. The ecosystem of the Delta and surrounding wetlands provide food, cover, and water for many species of birds, mammals, reptiles, and amphibians. Among the most important of these in the Delta region from a management perspective, is the giant garter snake (*Thamnophis gigas*) and California black rail (*Laterallus jamaicensis coturniculus*), which commonly occur in the delta canal areas within the vicinity of the project site.

Wetland Resources

Two unlined irrigation ditches are present on the project site. One ditch is located along the northern edge of the site and the other borders the southern edge. These ditches collect irrigation runoff from the site (Quad 1995). Sections of these ditches support vegetation that is typically characteristic of wetlands, including cattails and rushes. Although these ditches do support small stands of hydrophytic vegetation, they are often not considered jurisdictional waters of the U.S. by the United Stated Army Corps of Engineers (Corps). However, the Natural Resources Conservation Service (NRCS) will make the final

determination upon request by the project proponent, landowner, or operator. The wildlife indigenous to wetlands are the same as those disclosed in the previous section.

Special-Status Species

Special-status species include:

- plants and animals that are legally protected or proposed for protection under the California Endangered Species Act (CESA) or Federal Endangered Species Act (FESA);
- plants and animals defined as endangered or rare under the California Environmental Quality Act (CEQA);
- animals designated as species of special concern by the U.S. Fish and Wildlife Service or California Department of Fish and Game;
- animals listed as "fully protected" in the Fish and Game Code of California (Sections 3511, 4700, 5050 and 5515) ; and
- plant species listed in the California Native Plant Society's *Inventory of Rare and Endangered Vascular Plants of California* (2000).

Table 4.5-2 and 4.5-3 list special-status plant and animal species identified by the USFWS, CNDDB, and CNPS Inventory of Rare and Endangered Vascular Plants of California (Skinner and Pavlik 1994, CNPS 2000) as occurring within the project area or vicinity. Those species determined by project biologists as being out of geographic or elevational range, or to have extremely low potential for occurrence within the project's area of potential effects, are not presented in Tables 4.5-2 and 4.5-3.

Manteca Alternative Site

The alternate site is located in the City of Manteca as shown on Figure 3-3. This site is located in Township 2 South, Range 6 East, Section 1, in an agricultural area within the bounds of the South Manteca and Manteca General Plan planning areas.

The alternate site, at least on the surface, has similar biological resource conflicts and constraints as the project site as it is used as a wastewater discharge area. Wetlands may be a possible issue, and like the project site, the NRCS may decide to make a wetland determination on the property if it is chosen for the project.

Table 4.5-2

Special-Status Plant Species and Vegetation Communities with Potential Occurrence within the ProStyle Sports Complex project Site

PLANTS	STATUS			HABITAT AND OCCURRENCE IN PROJECT AREA	
Species	**State[1]**	**Federal[2]**	**CNPS[3]**	**Habitat[4]**	**Occurrence[5]**
Scutellaria lateriflora Blue skullcap	--	--	2	Meadows and seeps, marshes and swamps.	Known from the Delta near the site. Presumed absent due to restricted distribution. Bloom period: July – September.
Limosella subulata Blue mugwort	--	--	2	Riparian scrub, freshwater marsh, brackish marsh. Usually found on mud banks of the Delta in marshy or scrubby riparian association. Closely associated with *Lilaeopsis masonii*.	Endemic to the Sacramento/San Joaquin River Delta near the site. Bloom period: May – August.
Lathyrus jepsonii var. *jepsonii* Delta tule pea	--	FSC	1B	Freshwater and brackish marshes; usually on marsh and slough edges. Commonly found with *Typha, Juncus,* and *Scirpus.*	Distribution restricted to the Sacramento/San Joaquin River Delta near the site. Bloom period: May – June.
Hibiscus lasiocarpus Rose mallow	--	--	2	Freshwater marshes and swamps. Common to moist, freshwater-soaked riverbanks and low peat islands in sloughs.	In California, distribution known from the Sacramento/San Joaquin River Delta near the site. Bloom period: August – September.
Aster lentus Suisun marsh aster	--	FSC	1B	Brackish and freshwater marshes and swamps. Most often seen along sloughs with phragmites, rush, blackberry, cattails, etc.	Endemic to the Sacramento/San Joaquin River Delta near the site. Bloom period: August – November.

Table 4.5-2

Special-Status Plant Species and Vegetation Communities with Potential Occurrence within the ProStyle Sports Complex project Site

PLANTS	STATUS			HABITAT AND OCCURRENCE IN PROJECT AREA	
Species	**State[1]**	**Federal[2]**	**CNPS[3]**	**Habitat[4]**	**Occurrence[5]**
Lilaeopsis masonii Mason's lilaeopsis	SR	FSC	1B	Freshwater and brackish marshes and riparian scrub. Occurs in tidal zones and in muddy or silty soil formed through river deposition or river bank erosion.	Local occurrence on an island at the confluence of White Slough and Little Potato Slough, 1.5 miles south of Terminous near the site. Bloom period: April – October.
PLANT COMMUNITIES					
Coastal and Valley Freshwater Marsh	--	--	--	See text for description.	Local occurrence at Disappointment Slough, 5 miles southwest of junction of Hwy 12 and I-5; Fourteen Mile Slough 2 miles northwest of Stockton (6 miles south of Junction of Hwy 12 and I-5).

Source: Parsons, 2001

[1] State status data from Special Plants List, California Natural Diversity Data Base (CDFG 2000).
SR = State rare
[2] Federal status data from USFWS letter dated January 10, 2000 and Special Plants List, California Natural Diversity Data Base (CDFG 2000).
FSC = Species of Special Concern
[3] California Native Plant Society (CNPS) Listing Categories (Skinner and Pavlik 1994) and CNPS (2000).
List 1B = Plants Rare, Threatened, or Endangered in California and elsewhere.
List 2 = Plants Rare, Threatened, or Endangered in California, but more common elsewhere.
[4] Habitat Sources:
-California Natural Diversity Data Base (CDFG 2000)
-Skinner and Pavlik (1994)
-Hickman (1993)
[5] Bloom period information from Skinner and Pavlik (1994).

Table 4.5-3

Special-Status Animal Species with Potential Occurrence within the ProStyle Sports Complex project Site

	STATUS		HABITAT AND OCCURRENCE IN PROJECT AREA	
Species	**State[1]**	**Federal[2]**	**Habitat[3]**	**Occurrence**
REPTILES				
Thamnophis gigas Giant Garter Snake	ST	FT	Prefers freshwater marsh and low gradient streams, but has adapted to drainage canals and irrigation ditches. Found in slow moving water with silt substrate during the summer; requires expanses of low growing emergent and streamside vegetation for basking. Overwinters in upland retreats or summer habitat.	Local occurrences 1.5 miles south of intersection of Hwy 12 and Thornton Road; White Slough (1 mile west of Hwy 12/Thorton Rd. junction), and Coldani Marsh (0.8 mile west of same junction) near the site.
Clemmys marmorata Western pond turtle	--	FSC	Obligate aquatic turtle of ponds, marshes, rivers, streams and irrigation ditches with aquatic vegetation. Needs basking sites and sandy banks or grassy open fields for egg laying.	Local documented occurrences at Coldani Marsh (0.8 mile west of Thornton Road and Hwy 12), and 1.5 miles south of same junction, 0.5 mile east of Wik Slough near the site.
BIRDS				
Laterallus jamaicensis coturniculus California black rail	ST	FSC	Marshes bordering large bays. Habitat typically *Scirpus/Typha* marsh.	Closest documented occurrence at White Slough (1 mile west of Hwy 12/Thornton Rd. junction) near the site.
Buteo swainsoni Swainson's hawk	ST	--	Breeds in riparian and oak savannas in the Central Valley. Forages in adjacent grassland or suitable farm fields.	Project site provides foraging habitat. The closest known nest site is at Oak Grove Regional Park south of the site.

Source: Parsons, 2001

[1] State status data from Special Animals List, California Natural Diversity Database (CNDDB) (CDFG 2000).
[2] Federal status data from USFWS letter dated January 10, 2000 and Special Animals List, CNDDB (CDFG 2000).

ST = State listed Threatened
FT = Federally listed Threatened
FSC = Species of Special Concern

[3] Habitat Sources: California Natural Diversity Data Base (CDFG 2000).

Regional Resource Planning Efforts

Several regional planning efforts that address the protection of the diversity of biological resources have been undertaken in the area. This includes the 1998 San Joaquin County multi-species habitat conservation and open space planning effort (San Joaquin County Habitat Policy Advisory Committee, 1998). A summary of these efforts and applicable guidelines for natural resources protection is presented in Table 4.5-4.

Regulatory Framework

Federal Endangered Species Act

The Federal Endangered Species Act of 1973 (FESA) recognized that many species of fish, wildlife, and plants are in danger of or threatened with extinction and established a national policy that all federal agencies should work toward conservation of these species. The Secretary of the Interior and the Secretary of Commerce are designated in FESA as responsible for identifying endangered and threatened species and their critical habitats, carrying out programs for the conservation of these species, and rendering opinions regarding the impact of proposed federal actions on endangered species. FESA also outlines what constitutes unlawful taking, importation, sale, and possession of endangered species and specifies civil and criminal penalties for unlawful activities.

Biological assessments are required under Section 7(c) of FESA if listed species or critical habitat may be present in the area affected by any major construction activity as defined in Part 404.02. Under Section 7(a)(3) every federal agency is required to consult with the USFWS or National Marine Fisheries Service on a proposed action if the agency has reason to believe that an endangered or threatened species may be present in an area affected by the proposed action and that implementation of the action will likely affect the species.

California Environmental Quality Act

CEQA Guidelines - Article 5, Section 15065

Article 5, Section 15065 of the CEQA Guidelines requires that a lead agency make mandatory findings of significance in an EIR if:

> "The project has the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish and wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory."

Table 4.5-4

Summary of Regional Resource Planning Efforts

Jurisdiction	Program Name	Public/Private	Resource Protection Guidelines
San Joaquin County Council of Governments	San Joaquin County Multi-species Habitat Conservation and Open Space Plan	Public	Provide for the long-term management of plant, fish and wildlife species, especially those that are currently listed, or may be listed in the future, under the Federal Endangered Species Act (ESA) or the California Endangered Species Act (CESA).
California Bay Delta Counties and the State of California	Cal/Fed Bay Delta Program: Ecosystem Restoration Program	Public	Improve and increase the quantity, diversity and quality of aquatic habitats and improve ecological functions in the Bay-Delta system to support increased and sustainable populations of diverse and valuable plant and animal species.
Central Valley counties and the State of California	Central Valley Joint Habitat Venture (CVJHV)	Private/Public	Protect, maintain and restore habitat to increase waterfowl populations to desired levels in the Central Valley of California consistent with other objectives of the North American Waterfowl Management Plan. The CVJHV is comprised of representatives from the California Waterfowl Association, Ducks Unlimited, National Audubon Society, The Nature Conservancy, The Trust for Public Land, and American Farmland Trust.
California Department of Fish and Game	Federal Section 6 funding	Public	Evaluate management practices on State-owned areas in the San Joaquin Valley and investigate whether past and current management practices on State-owned and managed Wildlife Areas may have contributed to the apparent decline of giant garter snakes in the San Joaquin Valley. Develop better management practices.
Bureau of Reclamation	Central Valley project Operation and Maintenance Plan: Protection of Endangered Species.	Public	Specifies measures to reduce the impacts of routine maintenance procedures to giant garter snakes and their habitats, and to other listed species.

Source: Parsons, 2001

CEQA Guidelines - Section 15380

Rare or endangered species are defined in the CEQA Guidelines (Section 15380) as follows:

(a) "Species" as used in this section means a species or subspecies of animal or plant or variety of plant.

(b) A species of animal or plant is:

(1) "Endangered" when its survival and reproduction in the wild are in immediate jeopardy from one or more causes, including loss of habitat, change in habitat, overexploitation, predation, competition, disease, or other factors; or

(2) "Rare" when either:

(A) Although not presently threatened with extinction, the species is existing in such small numbers throughout all or a significant portion of its range that it may become endangered if its environment worsens; or

(B) The species is likely to become endangered within the foreseeable future throughout all or a significant portion of its range and may be considered "threatened" as that term is used in the Federal Endangered Species Act.

(c) A species of animal or plant shall be presumed to be rare or endangered as it is listed in:

(1) Sections 670.2 or 670.5, Title 14, California Administrative Code; or

(2) Title 50, Code of Federal Regulations Sections 17.11 or 17.12 pursuant to the Federal Endangered Species Act as rare, threatened, or endangered.

(d) A species not included in any listing identified in subsection (c) shall nevertheless be considered to be rare or endangered if the species can be shown to meet the criteria in subsection (b).

CEQA Guidelines - Appendix G

Appendix G of the State CEQA Guidelines lists criteria for determining whether impacts are considered significant. Impacts on biological resources are potentially significant if the project would:

1. Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations,

or by the California Department of Fish and Game or U.S. Fish and Wildlife Service;

2. Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service;

3. Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means;

4. Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites;

5. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance; and/or

6. Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan or other approved local, regional, or state habitat conservation plan.

California Endangered Species Act

The California Endangered Species Act (CESA) (Fish and Game Code Sections 2050-2098) establishes a State policy to conserve, protect, restore, and enhance any endangered species or any threatened species and its habitat. The Fish and Game Commission is charged with establishing a list of endangered and threatened species. State agencies must consult with the Department of Fish and Game to determine if a proposed project is likely to jeopardize the continued existence of any state-listed endangered or threatened species.

Section 2081 of the Fish and Game Code allows the "take" of a species listed as threatened or endangered under CESA. Take is defined as any act that involves direct mortality or other actions that may result in adverse impacts when attempting to take individuals of a listed species. Under Section 2081, the state Department of Fish and Game may issue a memorandum of understanding to authorize take for scientific, educational or management purposes only. Private development that may adversely affect a listed species is prohibited from any take of a species unless the sponsor obtains a memorandum of understanding for the development project pursuant to Section 2081. The applicant must agree to strict measures and standards for the management of the species and sign a Memorandum of Understanding to carry out these measures.

California Fish and Game Code

Native Plant Protection Policy

The goals of the California Native Plant Protection Policy are as follows:

> The intent of the Legislature and the purpose of this chapter is to preserve, protect, and enhance endangered or rare plants of this state (Section 1900). For purposes of this Chapter, a 'native plant' means a plant that grows in a wild uncultivated state which is normally found native to the plant life of this state (Section 1901).
>
> The commission may adopt regulations governing the taking, possession, propagation, transportation, exportation, importation, or sale of any endangered or rare native plants. Such regulations may include, but shall not be limited to, requirements for persons who perform any of the foregoing activities to maintain written records and to obtain permits which may be issued by the department (Section 1907).
>
> No person shall import into this state, or take, possess, or sell within this state, except as incident to the possession or sale of the real property on which the plant is growing, any native plant, or any part or product thereof, that the commission determines to be an endangered native plant or a rare native plant, except as otherwise provided in this chapter (Section 1908).
>
> All state departments and agencies shall, in consultation with the department, utilize their authority in furtherance of the purposes of this chapter by carrying out programs for the conservation of endangered or rare native plants. Such programs include, but are not limited to, the identification, delineation, and protection of habitat critical to the continued survival of endangered or rare native plants (Section 1911).

Biological Resources Goals, Objectives, and Policies

Table 4.5-5 identifies the Lodi General Plan's goals, objectives, and policies that provide guidance for development in relation to biological resources in the project area. The table also indicates which Biological Resources criteria are responsive to each set of policies.

Table 4.5-5

General Plan Goals, Objectives, and Policies - Biological Resources

Adopted Plan Document	Document Section	Document Reference	Policies	Relevant Evaluation Criteria[1]
City of Lodi General Plan	Conservation Element	Goal E	1. The City shall regulate the removal of heritage trees. 2. New developments shall be sited to maximize the protection of native trees, sensitive plants and wildlife habitat. 3. The City shall encourage the use of native plant species for landscaping. 4. The City shall require site-specific surveys to identify significant vegetation and wildlife habitat for development located in or near sensitive habitat areas. 5. The City shall support federal and state laws and policies preserving rare threatened and endangered species. 6. The City shall support strong regulatory action by the State Regional Water Quality Control board to prevent discharge of substances harmful to wildlife. 7. The City will work with the CDFG in identifying and preserving areas suitable for Swainson's hawk and burrowing owl habitat. 8. The City shall manage portions of storm drainage detention ponds and drainage ponds as wildlife habitat.	1,2,3,4,5

Source: Parsons, 2001

1. Evaluation criteria are presented in Table 4.5-6.

EVALUATION CRITERIA WITH POINTS OF SIGNIFICANCE

Table 4.5-6 summarizes both the evaluation criteria and points of significance used to address potential impacts to biological resources.

The California Fish and Game Code, NEPA, CEQA, FESA, CESA, and the City of Lodi General Plan were used as supporting documentation in developing the evaluation criteria and points of significance. In addition, pertinent policies and databases from the CDFG and the USFWS were also considered.

Table 4.5-6

Evaluation Criteria and Points of Significance - Biological Resources

Evaluation Criteria	As Measured By	Point of Significance	Justification
1. Will the project cause loss of individuals or occupied habitat of endangered, threatened, or rare wildlife or plant species[1]?	a. Number of individuals of a plant or wildlife species that would be lost b. Acres of occupied or designated critical habitat	a. Greater than 0 individuals b. Greater than 0 acres	FESA, CESA (Sections 2062 and 2067), CEQA (Article 5, Section 15065 and Appendix G), and California Native Plant Protection Act (CDFG Code Sections 1900-1913); City of Lodi General Plan, Conservation element, Goal E, Policies 6 & 14.
2. Will the project cause loss of individuals of CNPS List 2, 3, or 4 plant species?	Number of plant species or populations that would experience a loss of individuals	Greater than 15 percent of known occurrences or populations in San Joaquin County	CEQA (Article 5, Section 15065); City of Lodi General Plan, Conservation element, Goal E, Policy 6.
3. Will the project cause loss of active raptor nest sites or other breeding sites?	Number of active sites	Greater than 0 active sites	CEQA (Article 5, Section 15065), Fish and Game Code - (Section 3503.5); City of Lodi General Plan, Conservation element, Goal E, Policy 6 and 14.
4. Will the project cause permanent loss of sensitive wildlife habitat[2]?	Acres of sensitive wildlife habitat	Greater than 25 percent of each habitat type in San Joaquin County	CEQA (Article 5, Section 15065), City of Lodi General Plan, Conservation element, Goal E, Policy 3.
5. Will the project cause permanent loss of sensitive native plant communities?	Acres of sensitive native plant community lost	Greater than 0 acres	CEQA (Article 5, Section 15065; Appendix G), CDFG Interim Wildlife/Hardwood Management Guidelines (February 1, 1989), CDFG (CNDDB 2000); City of Lodi General Plan, Conservation element, Goal E, Policy 3.
6. Will the project substantially block or disrupt major wildlife migration or travel corridors[3]?	Number of corridors substantially blocked or disrupted	Greater than 0 corridors	CEQA (Appendix G); City of Lodi General Plan, Conservation element, Goal E, Policy 6.

Source: Parsons, 2001

Notes:

CDFG California Department of Fish and Game
CEQA California Environmental Quality Act
CESA California Endangered Species Act
CNDDB California Natural Diversity Data Base
CNPS California Native Plant Society
FESA Federal Endangered Species Act
USFWS United States Fish and Wildlife Service

[1] Endangered, threatened, or rare is defined here as:
- federally listed endangered, threatened, or proposed plant or wildlife species;
- state listed endangered, threatened, or proposed plant or wildlife species or rare plant species;
- federal candidates for listing; and
- CNPS List 1B plant species.

[2] Sensitive wildlife are defined here as:
- wildlife designated as "species of special concern" by the CDFG or USFWS; and
- wildlife listed as "fully protected" in California.

[3] "Major corridor," for purposes of the EIR, is defined as any habitat that serves as a movement corridor for entire populations of a given species, essential to completion of their life cycle.

METHODOLOGY

Parsons conducted reconnaissance-level biological surveys at the site on December 14, 1999. The purpose of the survey was to characterize existing baseline conditions and to determine the presence or potential presence of special-status plants, wildlife, and plant communities. Prior to the survey all biological resources that could be potentially impacted by the project were identified through computer searches of California Natural Diversity Data Base database (CNDDB) *Rarefind*, the California Native Plant Society's (CNPS) Inventory of Rare and Endangered Vascular Plants of California, and through consultation with the USFWS. CNDDB and CNPS record searches were conducted in December 1999 for the Terminous USGS 7.5 minute quadrangle that contains the project area and the eight additional quads that border this quad.

The Manteca alternative site was identified late in the process as a viable site through study of the various local general plans, local zoning, and undeveloped aerial photographic signatures, along the I-5, I-205, and State Highway 120 corridors. Inferences on site conditions were obtained from study of a 1:50,400 aerial photograph taken June 18, 1998 by Air Flight Service, San Jose, California. The CNDDB and CNPS electronic databases were scanned for the Lathrop 7.5 minute quadrangle that contains the Manteca alternative site. No field visits have been conducted for the Manteca alternate site.

A reconnaissance-level survey for biological resources was conducted within the project area along Thornton Road and adjacent farm roads on December 14, 1999. Wildlife surveys focused on the identification of suitable habitat for special-status species. Observations of special-status plant and wildlife species and important habitat features were recorded. According to the field notes taken by wildlife biologist Ed West, Ph.D., a foraging loggerhead shrike and a northern harrier were observed on the project site. Other species that may occur there, but were not observed during the visit include western pond turtle, giant garter snake, Swainson's hawk, white-tailed kite, short-eared owl, merlin, California horned lark, and long-billed curlew.

ENVIRONMENTAL CONSEQUENCES (IMPACTS) AND RECOMMENDED MITIGATION MEASURES

Table 4.5-7

Biological Resources Impacts

Evaluation Criteria	As Measured By	Point of Significance	Impact	Type of Impact[1]	Level of Significance[2]
1 Will the project cause loss of individuals or occupied habitat of endangered, threatened, or rare wildlife or plant species[3]?	a. Number of individuals of a plant or wildlife species that would be lost b. Acres of occupied or designated critical habitat	a. Greater than 0 individuals b. Greater than 0 acres	Loss of habitat	C, O&M	⊙
2. Will the project cause loss of individuals of CNPS List 2, 3, or 4 plant species?	Number of plant species or populations that would experience a loss of individuals	Greater than 15 percent of known occurrences or populations in San Joaquin County	None	C, O&M	❍
3. Will the project cause loss of active raptor nest sites?	Number of active nesting sites	Greater than 0 active nest sites	None	C, O&M	⊙
4. Will the project cause permanent loss of sensitive wildlife habitat? [3]	Acres of sensitive wildlife habitat	Greater than 25 percent of each habitat type in San Joaquin County	Loss of habitat	O&M	⊙
5. Will the project cause permanent loss of sensitive native plant communities?	Acres of sensitive native plant community lost	Greater than 0 acres	None	O&M	==
6. Will the project component substantially block or disrupt major wildlife migration or travel corridors?[4]	Number of corridors substantially blocked or disrupted	Greater than 0 corridors	None	O&M	==

Source: Parsons, 2001

Notes:
[1]C = Construction O&M = Operation & Maintenance
[2] Level of Significance Codes
== No impact ❍ Less than significant impact; no mitigation proposed
⊙ Significant; less than significant after mitigation
[3] Endangered, threatened, or rare is defined here as:

- federally listed endangered, threatened, or proposed plant or wildlife species;
- state listed endangered, threatened, or proposed plant or wildlife species or rare plant species;
- federal candidates for listing; and
- CNPS List 1B plant species.

[3] Sensitive wildlife are defined here as:

- wildlife designated as "species of special concern" by the California Department of Fish and Game or U.S. Fish and Wildlife Service; and
- wildlife listed as "fully protected" in California.

[4] A "major corridor," for purposes of the EIR, is defined as any habitat that serves as a movement corridor for entire populations of a given species, essential to completion of their life cycle.

Impact: 4.5-1 Will the project cause loss of individuals or occupied habitat of endangered, threatened, or rare wildlife or plant species?

Analysis: *Less than Significant; No Project*

The No Project Alternative will not impact individuals or occupied habitat of endangered, threatened, or rare wildlife or plant species.

Analysis: *Significant; All Other Alternatives*

An active Swainson's hawk nest has been confirmed approximately 1.5 miles from the project site (Quad 1995). The Manteca alternative site also has active Swainson's hawk nests in the vicinity (CNDDB 2000). Since the species often returns to the same nesting trees in successive years it is irrelevant that nest sightings are from "a long time ago": impacts to Swainson's hawk breeding are significant regardless of the history of each nesting tree. Construction of the project will result in the loss of approximately 400 acres of Swainson's hawk foraging habitat. Loss of Swainson's hawk foraging habitat is considered to be significant.

The project site is within the known distribution of the giant garter snake. Local CNDDB occurrences of giant garter snakes are 1.5 miles south of the intersection of Hwy 12 and Thornton Road; at White Slough (1 mile west of Hwy 12/Thornton Road junction), and at Coldani Marsh (0.8 miles west of same junction). This species is usually found in freshwater marsh habitat and low-gradient streams, but has also adapted to artificial habitats such as drainage canals and irrigation ditches. The project site includes two unlined irrigation ditches that support wetland vegetation areas suitable as giant garter snake habitat. Mark and recapture studies of giant garter snakes show individuals can move long distances (up to 5 miles) (USFWS 1999). The proximity of the project site to White Slough and the interconnected system of irrigation canals and ditches originating at the slough suggest giant garter snakes could use the project site. Loss of this potential habitat is considered to be significant.

Mitigation: **4.5-1 Loss of Individuals and Habitat of Endangered, Threatened, and Rare Species**

The San Joaquin County Multi-species Habitat Conservation and Open Space Plan (SJMSCP) was approved and adopted by all parties including the City of Lodi. Mitigation for loss of Giant Garter Snake and Swainson's hawk habitat according to the SJMSCP is listed below.

Giant Garter Snake (Section 5.2.4.8, SJMSCP) - Construction shall occur during the active period for the snake, between May 1 and October 1. Between October 2 and April 30, the Joint Powers Authority (JPA) shall determine if additional measures are necessary to minimize and avoid take. Vegetation clearing is limited to 200 feet on the banks of potential aquatic habitat to the minimal area necessary. Heavy equipment within 200 feet of the aquatic habitat is confined to existing roadways. Construction personnel training on giant garter snake is required prior to construction commencement. Retained irrigation ditches shall be fenced, with limited access and buffers to maintain water quality. Pre-construction surveys shall occur within 24-hours of ground disturbance. Capture and removal of any giant garter snakes on site will be conducted in accordance with USFWS protocol.

Swainson's Hawk (Section 5.2.4.11, SJMSCP) - The Project Proponent has the option of retaining known or potential Swainson's hawk nest trees or removing the nest trees. If nest trees are retained and become occupied during construction activities, all construction shall remain a distance of two times the dripline of the tree, measured from the nest. If nest trees are removed, they may be removed between September 1 and February 15, when the nests are unoccupied.

Pre-construction surveys for species potentially inhabiting the site shall occur within 60 days of construction commencement. If species are found and require relocation, efforts to relocate the species shall comply with Section 5.2.5.1 of the SJMSCP. Compensatory mitigation includes off-site preservation of giant garter snake and Swainson's hawk habitat at a ratio of 1:1 acre, according to SJMSCP protocol or through purchase of banked lands. The location and preservation of suitable mitigation habitat will be determined through consultation with JPA, USFWS, and CDFG. Alternately, in lieu mitigation funding for habitat purchase or restoration may be utilized at a fee rate as established by the Lodi City Council pursuant to the San Joaquin County Multi-Species Habitat Conservation and Open Space Plan. To ensure proper steps were taken, annual reporting and monitoring are required as established in Section 5.9 of the SJMSCP. Mitigation will be in place prior to any construction activities. The California Department of Fish and Game may require implementation of a 2081 agreement pursuant to the Fish & Game Code.

After Mitigation: *Less than Significant, All Alternatives*

Implementation of this measure will reduce the impact to a less than significant level, provided that the mitigation acreage set-aside is in perpetuity, and that no "take" of either Swainson's hawk or giant garter snake occurs during construction.

Impact: 4.5-2 Will the project cause loss of individuals of CNPS List 2, 3, or 4 plant species?

Analysis: *Less than Significant Impact, All Alternatives*

Suitable habitat for CNPS 2, 3, or 4 species does not occur within the project site because of the intensive farming that occur.

Mitigation: No mitigation is needed.

Impact: 4.5-3 Will the project cause loss of active raptor nest or other breeding sites?

Analysis: *Significant, All Alternatives*

The project site has a couple of small trees near the I-5 fence that provide suitable habitat for raptor nesting. Cottonwoods near the Manteca alternative site, according to the CNDDB (CNDDB 2000) provide habitat for nesting Swainson's hawk. Western burrowing owl is known to exist in Tracy, a few miles to the west.

Mitigation: **4.5-3 Nesting Raptors and Birds**

Conduct pre-construction surveys for nesting raptors and other birds, including western burrowing owl. If nesting raptors are identified, construction may not disturb nests within a 75 meter buffer zone for burrowing owl and twice the size of the nest tree dripline for Swainson's hawk during the nesting season or before young have fledged. Burrows not occupied by burrowing owl may be destroyed to prevent future occupation and risk to the species. Outside the breeding season, burrowing owls may be passively relocated and their burrows blocked to prevent re-entry. In addition to these measures, compensatory measures as listed in Mitigation 4.5-1 shall be implemented to maintain alternative habitat for the species.

After Mitigation: *Less than Significant, All Alternatives*

Implementation of this measure will reduce the impact to a less than significant level.

Impact: 4.5-4 Will the project cause a permanent loss of sensitive wildlife habitat?

Analysis: See analysis and mitigation for Swainson's hawk and giant garter snake above in 4.5-1.

Impact: 4.5-5 Will the project cause a permanent loss of sensitive native plant communities?

Analysis: *No Impact, All Alternatives*

The project site does not include sensitive native plant communities. While the wetland ditches contain native plant species, they are not intact plant communities such as freshwater marsh, which occurs to the west of the site (west of the I-5 freeway and levee); do not contain a high weed component, and are managed to collect irrigation runoff.

Mitigation: No mitigation is needed.

Impact: 4.5-6 Will the project component substantially block or disrupt major wildlife migration or travel corridors?

Analysis: *No Impact, All Alternatives*

The project and alternate site do not occur along a wildlife migration or travel corridor.

Mitigation: No mitigation is needed.

CUMULATIVE IMPACTS

The project would result in the loss of habitat for Swainson's hawk and giant garter snake. Project impacts will be fully mitigated through protection of suitable habitat off-site. Because all impacts from the project will be fully mitigated, there are no additive effects to the impacts of the cumulative projects. No additional mitigation is proposed.